



Dworshak Fisheries Complex

Monthly Activity Report



March Highlights

Dworshak

SST BY16 - 1,095,857

SCS BY16 - 2,557,642

SCS BY15 - released

SST BY 17 eggs -1,175,856

SST BY 17 nursery— 893,626

Kooskia

SCS BY 16 - 15,310

SCS BY 15 - 692,046

SCS BY 15 Clearwater -
543,160 released

Coho BY 15 Dworshak -
289,000 released

Coho BY 15 Eagle Cr.-
290,000

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U.S. Fish & Wildlife Service, Region 1

Managers Message - Steve Rodgers

Volume 6 Issue 6



Steve Rodgers, Complex Manager Credit: Jill Olson

Some folks might say "March sucked". A more positive expression might be "March was challenging". We monitored extremely high total dissolved gas levels in the North Fork River, and pumped that water onto our smolts. We did that because we had no choice, even though we know it's not good for them. We debated with others on behalf of our fish...largely to no avail. Meanwhile, you worked day after day in cold, wet weather; on weekends, long days, whatever it took. You endured a lot of stress. You faced ever-changing plans, new methods, fear of the unknown, others. You did so for your fish, on the eve of their journey to the ocean. How is it that we've gotten through this tough time without a hitch?

For me, the successful release 1.5M spring Chinook smolts, early release of half of our steelhead smolts, and movement of the remainder into the safe harbor of reservoir water-fed ponds, are due to one key factor: your positive attitude. When things got tough, the Dworshak Fisheries Complex team came together and accomplished the mission with smiles, volunteerism, laughter, and a can-do spirit. As a result, we succeeded despite a lot of curve balls.

In my experience, no single human attribute is more important than attitude. Great things can be accomplished, rain or shine, when we look for and embrace the positive and avoid the negative. Charles Swindoll said that "life is 10% what happens to me and 90% how I react to it". He was speaking to the power of positive thinking. This sums up what I witnessed this month. There was no "we can't" or "that won't work". Instead, I heard "we can" and "not a problem". I saw you hustle, find a way, stay late, adjust on the fly...you made it happen.

A positive attitude is always a high priority in my hiring decisions. That is because being positive makes the difference when things are going well, and when things are not. The rest can be learned. Your outlook is contagious, and is felt by and influences your coworkers. If you have a positive attitude, keep it going and thank you. If you do not, change it. You have the power. The wonder or weight of your world is driven exclusively by...YOU.

I want to take this opportunity to thank each of you for a job well done on behalf of our program. The work you do is always important, to say the least. This month, when it mattered, your great attitudes made the difference. You didn't let small or large hurdles get in the way...and as a result we accomplished a difficult mission. Now your fish are heading downriver to the Pacific, and up to the Gulf of Alaska, and back again. They will touch the lives of people everywhere they go. Is that important work? Absolutely. Attitude is everything. Thank you. Thank you. Thank you.



Credit: Jill Olson, FWS

A decision was made by co-managers to release the BY15 SCS 1.5 weeks early to avoid the high TDG in the North Fork Clearwater River.



Credit: Jill Olson, FWS

Clear Creek release groups were trucked and released at Clear Creek.



Credit: Jill Olson, FWS

It's no easy chore to haul the transport hoses around!

Dworshak Hatchery Production - Izbicki, Sommer, Bisbee

Dworshak Stock - Spring Chinook Salmon (SCS)

Brood Year 2015 (BY15)

Chinook rearing was impacted in March by high TDG (Total Dissolved Gas) levels due to increased water discharge at Dworshak Dam. Flows increased out of Dworshak Reservoir on March 3 and continued all month with a brief lull March 20-22. Gas levels were as high as 127% in the North Fork Clearwater River, but Hatchery degassing systems were able to bring TDG levels down to 103-107%. While the vacuum degassers dropped TDG considerably, levels were still dangerously high and gas bubbles appeared in the SCS immediately. Brood Year 2015 SCS were released on March 20th into the Mainstem Clearwater River. A total of 1,498,736 pre-smolts were pumped into the River about 10 days earlier than scheduled due to the high TDG levels in the hatchery water supply. Fry averaged 23.1fpp (fish per pound) at release. Water temperature dropped over the month from 41.7 at the beginning of the month down to 40.7 at the end of the month only allowing for 0.2" of growth during the month. Mortality remained consistent from E.O.M. February (3,191) to E.O.M. March (3,215), higher than average for this time of year. The overall fish health has looked pretty good on the SCS; however, there are fish in several raceways that appear to have their equilibrium compromised from the Phoma outbreak. These fish swim on their sides, but are still swimming and are hard to catch. The fish were on track to hit 20fpp; however, a decision was made by co-managers to release the BY15 SCS 1.5 weeks early to avoid the high TDG in the N.Fork Clearwater River and enjoy the high, turbid waters of the Mainstem Clearwater all of the way out to the ocean. All fish were pumped to the Mainstem Clearwater. There were no fish direct released into the North Fork Clearwater River as usual.

Brood Year 2016 (BY16)

Brood year 2016 eggs hatched in January. At the end of March fry were on chilled water at an average of 37 degrees. We currently have 2,557,642 sac fry on station. Fry will remain in incubation on chilled water until they are ponded in early May. Low-head Oxygenators are being installed on the and baffles are being installed in the raceways to improve water quality and waste management. These projects will be completed prior to fry ponding.

Coho Salmon (COS)

Brood Year 2015 (BY 15)- No Report

Brood Year 2016 (BY 16)- No Report

Dworshak Stock- Summer Steelhead (SST)

Brood Year 2016 (BY16)

Steelhead were also impacted in March by high TDG levels due to increased water discharge at Dworshak Dam. Flows increased out of Dworshak Reservoir on March 3 and continued all month with a brief lull March 20-22. Gas levels were as high as 127% in the North Fork Clearwater River, but Hatchery degassing systems were able to bring TDG levels down to 103-107%. While the vacuum degassers dropped TDG considerably, levels were still dangerously high and gas bubbles appeared in the SST immediately. Fish health Examined SST daily for gas bubble damage and it was apparent that the fish in Systems 2 and 3 were being affected more than fish in System 1. System 1 has the capacity to blend both river and reservoir water, and it is normal for us to run as much reservoir water through System 1 as possible. The Management Team decided that in order to preserve the brood year the majority of the SST would be released early and the remainder would be moved to System 1 and additional reservoir water would be blended in to bring TDG down to 101%. From 3/21-23, Clear Creek release groups were trucked and released at Clear Creek; Lolo releases groups were direct released into the Mainstem Clearwater River; and direct release groups were released into the Mainstem Clearwater River. The remaining SST were Red House and Direct release groups. These fish were moved to System 1 and will be direct released into the Mainstem Clearwater River in April. A total of 402,027 BY 16

(Continued page 3)

Dworshak Hatchery Production

(Continued from page 2)

Dworshak Stock- Summer Steelhead (SST)***Brood Year 2016 (BY16)***

SST were released into Clear Creek and 924,944 BY 16 SST were released directly into the Mainstem Clearwater River. Clear Creek fish averaged 5.7 fpp; Lolo averaged 8.8 fpp; and Direct Release averaged 5.3 fpp.

At the end of March, there were 1,095,857 fish from takes 5-9 in System 1 averaging 6.4 fpp. Mortality in the Systems remained at 0.3%. Water temperature dropped to 40.7 degrees so fish have slowed down a little but there are definitely on track to make size at release.

Brood Year 2017 (BY 17)

Spawning continued in March. This year decided to spawn South Fork Localized Broodstock (SFLB) for Clearwater Hatchery (CWH) separately from Dworshak. These egg takes took place on Wednesdays and eggs were incubated at Dworshak to the eyed stage then transferred to CWH. We spawned takes Take 5 CWH on March 1, Take 6 CWH on March 8, Take 7 on March 14, Take 7 CWH on March 15, Take 8 on March 21, and Take 9 on March 28. We spawned 22 females during Take 5 CWH, 91 females during Take 6 CWH, 54 females during Take 7, 107 females during Take 7 CWH, 21 females during Take 8, and 132 females during Take 9. Clearwater had very poor eye up from their Take 6 CWH egg take so the Dworshak SFLB eggs that were taken during Takes 7 (34 females) and 8 (21 females) were given to CWH. Additional females were spawned during Take 9 to make up for the SFLB females and to complete CWH's SFLB egg take needs.

We enumerated Takes 3-5 in March. Enumerated eye up for these air-spawned takes averaged 91.4%. We had great eye up for Take 3 and outplanted 75,000 eyed eggs into the North Fork Clearwater River. At the end of March there were 706,169 eyed eggs/fry in incubation from Takes 4 & 5, and 1,175,856 green eggs from Take 7 & 9.

Takes 1 and 2 were ponded in the Nursery on 3/20/17 as swim up fry. They began feed on 3/21/17. Take 3 was ponded in the Nursery on 3/27/17 and began feed on 3/28/17. At the end of March there were 893,626 fry averaging 1375 fpp. Fry are being fed BioVita Fry 0 crum. Mortality was low for all three takes. Nursery water is being delivered through the Primary reservoir line and being heated to 54°F.

SUMMARY

Table 2. Total Production - Fish on Station March 31, 2017.

SP	BY	Location	Number	Wt (lbs)	FPP	L in	L mm
SCS BY 16	16	Incubation (Sac fry)	2,557,642				
SCS BY 15	15	Released					
SST BY 16	16	System 1	1,095,857	172,598	6	7.7	196
SST BY 17	17	Incubation (Eggs)	1,175,856				
SST BY 17	17	Nursery	893,626	650	1375	1.2	31
Total Fish/Fry on Station EOM			5,722,981	173,248			

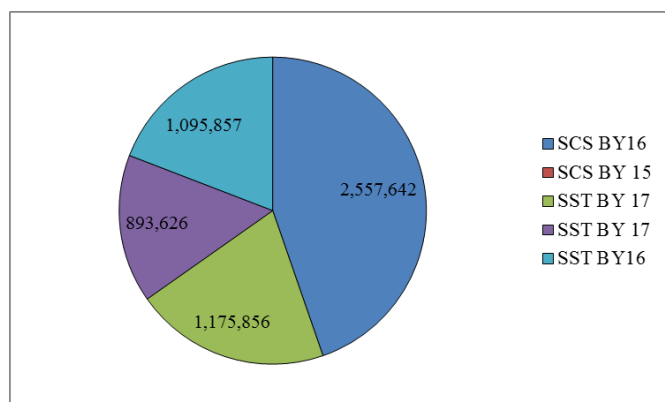


Figure 1. March 31, 2017 Total Fish/Eggs on Station.



Credit: Drobish, FWS

On March 17, LTC Delarosa awarded Adam with the Commander's coin.



Credit: Jill Olson, FWS

Data sondes were installed to monitor Total Dissolved Gas at several locations on the facility.



Credit: Jill Olson, FWS

The main boilers in Mech. 2 were started up for the nursery.

Dworshak NFH Meetings, Training and Conferences - Drobish

On March 1st, Steve Rodgers and Mark Drobish attended the Leadership Training with the Regional Directorate staff (i.e. Robyn Thorson, Terry Rabot) and Human Resources (David Clark, Michelle Bowden) in Boise, Idaho.

On March 1-3, Jeremy Pike and Mark Drobish attended the Idaho Chapter of the American Fisheries Society meeting in Boise, Idaho.

On March 8th, Steve Rodgers, Mike Tuell, Adam Izbicki, Jeremy Sommer, Scott Koehler, Mark Drobish participated in a conference call with Chris Starr, LSRCP Maintenance Coordinator and Lisa Kusnierz, EPA Permits Unit, Boise, Idaho regarding the Dworshak Hatchery's National Pollutant Discharge Elimination System Permit (NPDES) and potential options for modifications for the new NPDES permit.

On March 14, Scott Bettin and Trevor Downed, Bonneville Power Administration visited the Dworshak Fish Hatchery and Idaho Fish Health Center following a meeting at the Dworshak Dam. Mark Drobish and Dr. Marilyn Blair met with them on current fish health status resulting from high Total Dissolved Gas (TDG) levels due to Flood Control Operations and high discharge and "spill" levels from Dworshak Dam. Scott and Trevor also toured through the main river degassers and pump house to discuss current operations.

On March 22nd, Steve Rodgers, Adam Izbicki and Mike Tuell met attended a meeting in Lewiston, Idaho at the Idaho Fish and Game Regional Office to discuss "Run Timing", "Size at Maturation" and associated topics relative to our broodstock collection strategies for spring Chinook salmon and summer steelhead trout.

On March 28-30, Steve Rodgers, Mark Drobish, Mike Tuell, Jeremy Sommer and Jeremy Pike attended the annual Lower Snake River Compensation Program's Annual Meeting in Clarkston, Washington. Mark participated on a panel discussion on "Emergency Contingency Planning". Each of the panelists gave a brief presentation regarding a specific emergency event and then the panel answered questions along with input from all meeting participants.

LTC Delarosa awarded Adam with the Commander's coin last month. On March 17, LTC Delarosa stopped by DNFH to personally thank staff for all the hard work and dedication during the high spill conditions in the NF and resulting gas supersaturation in production river water. The LTC thanked Adam in person for his idea of lowering the aeration chamber 1' to increase degassing efficiency, which improved degassing performance by approximately 1%, which is significant for the fish. He awarded Adam with a COE commander's coin as formal thanks for a job well done.

DNFH Maintenance and Operations Activity Report - Koehler

- Replaced water hydrant at the SW corner of A bank, raceways
- Repaired 6 inch fire and maintenance line that developed a leak.
- Electrical dept. replaced three large security lights outside Mechanical 1, Generator building and front of main pump house.
- The electrical department found many electrical deficiencies in our on site housing. This is an ongoing project.
- Maintenance removed the large incubation chiller located in the incubation room in preparation of new boilers and heat exchangers
- The main boilers in Mech. 2 were started up for the nursery.
- Repair Parts have been ordered for the alarms and strobes in the nursery.
- Work continues in preparation of the LHOs and bulk oxygen tanks. Vacuums degassers, vacuum pumps and plumbing have been removed. 12 ft X 30 ft pad and fence were installed.
- Trucks and tankers were set up for the early release of steelhead.
- New foam gaskets were installed on the 30 existing mud valves in the raceways.
- Maintenance started the installation of new aluminum baffles in 4 of the raceways.
- Carpet was removed and new flooring installed in quarters 1 and 2.
- Degassers removed from A bank were moved to the upper boneyard for storage.
- All fire extinguishers were inspected and tagged for 2017.

The maintenance department has completed 40 PM work orders and 11 hand written requests in March.

Idaho Fish and Wildlife Conservation Office - Michael Murray

Staff participated in efforts to mitigate the effects high total dissolved gases (TDG) at Dworshak National Fish Hatchery. Size at release is a key parameters affecting post-release survival and office staff collected size data from representative spawning takes of fish designated to be released early.

Work began on completing the annual report backlog for steelhead. The report is undergoing a total re-organization to improve focus and report standard metrics that will allow the information to be viewed relative to other years. Historic CWT recoveries were assembled as part of that effort.

Staff continued to participate in summer Steelhead brood year 2017 spawning activities for Dworshak NFH. The office also continued to participate in the South Fork brood year 2017 summer Steelhead spawning activities for the IDFG Clearwater Fish Hatchery, also being conducted at Dworshak NFH. Production staff at Dworshak NFH continued to assist the office due to the office being short staffed.

Current CWT release numbers for Steelhead and Chinook salmon were calculated and tag information was sent to the Regional Mark Information System (RMIS). Work continued on recovering coded wire tags from snouts taken from Chinook at Kooskia spawning in 2016.

Staff from the office traveled to Hagerman NFH to get trained on a PIT tag detection system designed by Abernathy Fish Technology Center to help evaluate the PRAS system. Actual operation of the system will begin April 10 and Abernathy and IFWCO personnel will be onsite. The equipment will become part of the IFWCO inventory for future use in other applications.

The 2017 fall Chinook beach seining/PIT tagging season started in Hells Canyon. Due to high water some sites haven't been accessible but Chinook recruits have been captured and tagged at sites that were sample able.

Staff worked with the Nez Perce Tribe Department of Fisheries Resources Management, and the Idaho Power Company, on fall Chinook fry emergence estimates to help managers plan spill implementation.

Work was completed on the draft fall Chinook BPA annual and BiOP reports. The reports were forwarded to USGS counterparts for review and refinement. USGS will be adding the sections for our cooperative predation research.

Work continued on a review manuscript presently entitled "Upstream Migration and Spawning Success of Chinook Salmon in a Developed, Seasonally Warm River System" with staff of the USGS, Idaho Power Company, and NPT. The present section being written is on the effect of the thermal exposure of the female parent on embryo loss.

As part of ongoing pollinator projects, pollinator seeds were planted for seedling distribution at upcoming events. Events include an upcoming pollinator week, a pollinator pathway week, and the planting of a pollinator garden.

Meetings

Life cycle modeling coordination call with USGS and NOAA.

Pacific Northwest Mussel Work Group call

Migration Workshop in Boise

Lower Snake River Compensation Plan (LSRCP) meetings in Clarkston, Washington

Nez Perce Tribe staff to discuss the 2017 lamprey projects in the Clearwater basin

Idaho Chapter of the American Fisheries Society Meeting.



Credit: Karol Holthaus, NRCS

“Anyone know what anadromous means?” Hatchery in the Classroom students engage in classroom discussions with Biologist Jill Olson and Outreach Volunteer Karen Loranger.



Credit: Karol Holthaus, NRCS



Credit: Jill Olson, FWS

Students from Meadows, Idaho learn about parental based tagging!



Credit: Jill Olson, FWS

The month of March is our biggest month for school group visits. We hosted 520 kids and 72 teachers and parents! Sometimes three to four groups at a time!

Idaho Fish Health Center - Blair

March 2017

Dworshak NFH

Steelhead juveniles: Beginning March 4th and continuing through emergency early release during the week of March 20th, Dworshak system 2 and system 3 steelhead were alternatively examined every day for gas bubbles. As Total Dissolved Gases rose in the hatchery water supply, the progression of gas bubbles observed in the fish were documented by corresponding examination reports and samples that were taken for histology.

System 1 steelhead were examined for gas bubbles beginning on March 17 and continuing three times per week through the month of March. Monitoring examinations will continue until release, tentatively scheduled for April 17.

The Dworshak steelhead pre-release exam including a 60 fish sample was performed on March 15.

Monthly monitoring was conducted on the BY17 Steelhead juveniles in the nursery.

Spring Chinook juveniles: Due to increased levels of saturated gas in the hatchery and formation of gas bubbles in the fish, Dworshak spring Chinook juveniles were emergency released on March 20th.

Steelhead Broodstock: Fish health samples were taken on three steelhead spawn days in March for Dworshak production.

Kooskia NFH

Spring Chinook juveniles: Unfortunately due to a power failure, all Kooskia BY 2016 spring Chinook production lost water supply and died on March 17.

Nez Perce Tribal Hatchery

Spring Chinook juveniles: A 60 fish sample pre-release exam was performed on March 15 for spring Chinook at NPTH.

Nez Perce Tribe Fall Chinook Acclimation Program:

The fall Chinook 60 fish pre-release exam from Captain John Acclimation Site was performed on March 23. A monitoring exam was performed at Captain John Fall Chinook Acclimation Site on March 28 to check for gas bubbles. Bubbles were observed in the gills, lateral lines and fins.

A monitoring exam was performed at Pittsburgh Landing Fall Chinook Acclimation Site on March 20 to check for gas bubbles. Bubbles were seen in gills, lateral lines, and fins.

Import permit inspection exam for fall Chinook sub-yearlings at Lyons Ferry State Hatchery was conducted on March 30.

Information and Education— reported by Olson, Hills, Brostrom

Dworshak - Jill Olson

Facebook: Reach -14,8656 ; Engagements -3,119 **Website:** Page Loads—15 ; Unique –13; First Time - 11; Returning - 2

Visitors: We received 269 visitors from three states hosting 106 adults and 163 children (<18 years of age).

Tours: Twenty eight tours were provided to during the month of March. These tours included 72 adults and 520 school-aged children.

Outreach: I & E had 10 outreach engagements in the month of March. The majority of the activities centered around the Hatchery in the Classroom projects. Eyed-eggs were delivered to 11 classrooms on the Camas Prairie, Pierce, Kooskia, and Moscow, Idaho. Each delivery of eggs included classroom presentations and discussions regarding the importance of maintaining good water quality, feeding and tank management, and what students might observe as their eggs developed into fry. Dworshak Hatchery provided eyed-eggs for an additional 17 classrooms in Lewiston, Idaho, Clarkston and Pullman, Washington. The Idaho Department of Fish and Game and the USFWS work together to serve the Hatchery in the Classroom projects, providing equipment, education, and mentoring.

At various times during the month, seven classrooms received adult steelhead carcasses and guided, hands-on instruction on fish anatomy. The dissections reached 182 students and 15 adults.

Volunteer Hours: Nine volunteers contributed 150.5 hours. Their time was fairly evenly split between spawning activities, and outreach and education programs.

Miscellaneous accomplishments: The new interpretive panels have at last arrived on the Dworshak campus! We hope to be installing them very soon!

Kooskia - Kent Hills

Visitors: There were 205 visitors to the hatchery during this month; this figure is compiled by staff. Steelhead fishermen are beginning to stop at the hatchery to check the trap.

Outreach: Jill Olson visited Kooskia Elementary School to deliver eye-eggs and talk about the care and feeding of steelhead for the Hatchery in the Classroom project. This school dropped out of the program several years ago and decided to start-up again this year.

Salmon— Jody Brostrom

Outreach: As part of ongoing pollinator projects, pollinator seeds were planted for seedling distribution at upcoming events. Events include an upcoming pollinator week, a pollinator pathway week, and the planting of a pollinator garden.



KNFH long cold winter. Credit: Jill Olson, FWS

Smolts were smaller this year due to the long cold winter and late water temperature rise in the spring.



KNFH crew winter 2017. Credit: Jill Olson, FWS

Kooskia National Fish Hatchery - Hills

This activity report is implemented by the Tribal Fish Hatchery Manager, Kent Hills. All information in this report was collected and or performed by the hatchery staff during the preceding month.

Under SRBA and the Clearwater Annual Operating Plan, the Tribe, Service and Idaho Fish & Game have agreed to implement other fish production actions related to KNFH mitigation. Reports will include additional information about other species reared, processed and released in relation to KNFH operations.

Kooskia Chinook Brood Year 2015

A total of 692,046 BY15 Spring Chinook smolts that included (59,972 unclipped) were released into Clear Creek, they were 26.3 fish per pound, and we had a mortality of 179 this month. The fish were 5.023 inches (128 mm) they were on 41 degree creek water and consumed 2,157 pounds of feed at a cost of \$3,531.06. Total feed consumption by BY15 was 25,378 pounds of feed at a cost of \$41,417.06. Smolts were smaller this year due to the long cold winter and late water temperature rise in the spring.

Clearwater Chinook BY15

On 3/20/2017 a total of 543,160 Chinook smolts arrived from Clearwater Hatchery and placed into Burrows ponds for acclimation to Clear Creek water. They were released into Clear Creek on 3/29/2017. During their stay at Kooskia they consumed 934 pounds of feed and had a mortality of 418. There were an additional 225,074 Chinook smolts from Clearwater Hatchery that were released directly into Clear Creek on 3/21/2017.

Coho BY15

289,000 BY15 Coho smolts arrived at Kooskia hatchery from Dworshak on 2/28/2017 to acclimate to Clear Creek water, another 290,000 arrived from Eagle Creek Hatchery on 3/8/2017 for acclimation. 289,000 Coho (less mortality) were released into Clear Creek on 3/29/2017.

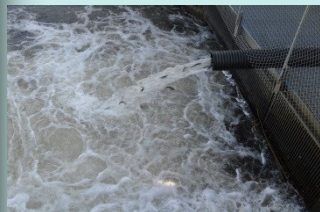
Kooskia Chinook Brood Year 2016

We have approximately 15,310 BY16 fry on station. In the early morning hours of 3/17/2017 the bio-filter lost power due to the main 200 amp breaker tripping in the generator room. The alarm system for the hatchery didn't alarm and no one was called to respond to the outage. With the power off to the bio filter, the water being pumped from the bio-filter to the outside rearing tanks was stopped. Fry in the rearing tanks consumed all the oxygen left in the water and suffocated. The bio-filter should have alarmed three system failures, one for power failure, the second for low water pressure, and low water flow. All three alarms failed to activate. We had a mortality of approximately 750,238.

Upon investigation following the power failure, it was found that some wiring had been changed in an underground pull box at some time in the past. The main leads to the bio filter had been spliced into and put into a fuse box in the pull box. This "fix" had caused problems and had rusted out so someone had cut them off and spliced three small wires to the cut leads and bypassed the 30amp fuses. These wires became the fuses, intermittently shorting out in the conduit leading to the hatchery office, especially with all the rain, and trip the 200amp breaker. This has been cut off and sealed up in the pull box. No further tripping of the breaker has occurred.

Kooskia Adult Trap Operations:

Trap closed all month.



File photo. Credit: KNFH

On March 21 Steelhead from Dworshak and Chinook from Clearwater Hatchery were released directly into Clear Creek.

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Kooskia NFH - Hills

(Continued from page 8)

Maintenance & Operations:

- Mar 01: Take 5 was moved to the rearing tanks with 1635 temperature units, 26,515 fish. The incubation system was then shut down.
- Mar 06: Turned water into the new Coho circular tanks for the first time. It was determined there was cardboard and fiber glass panels in the top portion of the tower which had not been removed upon installation. The cardboard was removed; the diffuser nozzles and the panels were installed, water was turned back on and worked correctly.
- Mar 07: Staff began replacing the eroded struts in pond 1 of the bio-filter. This requires the removal of 3 feet of media to access the lower bolts, holding the struts in place, removal of the eroded strut, install the lower bolt of the new strut, then from beneath the media, 6" x 6" beams and a house jack are used to push up the media platform until the upper section of the new strut matches the upper bolt hole. The new strut is then bolted in place and the media returned to its proper level. There are 4 struts to be replaced in pond 1.
- Mar 08: Kayla went to Spokane to pick up her government computer card. Three of the four struts were replaced in pond 1 of the bio-filter.
- Mar 09: Kayla was temporarily assigned to Dworshak and Rob Bohn assigned to Kooskia.
- Mar 09: Had a low creek water alarm at 9:37 PM, Kent responded to find silt had built up on the screens in the screen chamber, the silt was cleaned off and water was restored to the hatchery.
- Mar 10: Had a power out alarm at the bio-filter, the breaker was reset and the alarm was cleared.
- Mar 13: Four struts in pond 1 of the bio-filter have been replaced, 36 more have been ordered and will be replaced when possible within the three bays of the bio filter. Kent began assisting Clearwater Hatchery in the trapping and transportation of Steelhead from the South Fork of the Clearwater River to Dworshak.
- Mar 17: The circuit breaker on the bio-filter failed, and resulted in the power at the bio-filter being turned off. This resulted in the water stopping on the BY16 fish that were in the outside rearing tanks. The three alarms for power fail, low flow and low water pressure failed to go off. When staff came to work the fault was discovered but the loss of water flow resulted in 95% of BY 16 suffocating from lack of oxygen. The breaker was reset and power and water were restored.
- Mar 17: BY15 was released into Clear Creek.
- Mar 20: 543,160 Spring Chinook arrived from Clearwater Hatchery to acclimate to Clear Creek, they were placed in the Burrows ponds.
- Mar 21: Steelhead from Dworshak and Chinook from Clearwater Hatchery were released directly into Clear Creek. Power breaker for the bio-filter failed twice today causing the alarm to sound. Rick welded the sump pump in the Bio-filter together, Jim installed it and it worked as planned. A back-up pump is on order.
- Mar 22: A total of 403,636 Steelhead smolts were released into Clear Creek. 225,074 Chinook were released directly into Clear Creek from the Clearwater Hatchery. An alternative power line was ran from the office building to the Bio-filter in an effort to by-pass the faulty breaker in the generator room that provides power to the bio-filter.
- Mar 27: Jim is working the blower tubes in the bio-filter.
- Mar 31: Had low creek water alarm in the early morning hours. Upon arrival at the screen chamber, it was found to have a buildup of sand and debris which caused blocked water flow to the hatchery. The screens were cleaned and water flow was restored.

Kooskia NFH Training and Conferences:

- Mar 01: Meeting on road work for screen chamber access.
- Mar 13: Project leaders meeting.



Dworshak Complex photo taken February, 2017. Photo Credit: Jill Olson, FWS

Staff List

Dworshak Fisheries Complex Management:

Steve Rodgers, Dworshak Fisheries Complex Manager

Mark Drobish, Dworshak NFH Manager

Adam Izbicki (FWS) & Jeremy Sommer (NPT)

Dworshak NFH Assistant Hatchery Managers

Mike Tuell, SRBA Coordinator

Scott Koehler, Dworshak NFH Maintenance Supervisor

Doug Nemeth, Project Leader, Idaho Fish and Wildlife Conservation Office

Mike Faler, Aquatic Conservation Lead

Dr. William Conner, Fall Chinook Research Lead

VACANT- Fish Production M&E Lead

Kent Hills, Kooskia NFH Manager

Vacant, Kooskia NFH Maintenance Supervisor

Dworshak NFH Production: Angela Feldmann, Tom Tighe, Rob Bohn, Wayne Hamilton, Mike Bisbee, Tui Moliga, Steve Coomer, Carter Lopez, Jayden Hudson, Steve Jeffers, Jayson Thompson, Aidan Frye, Jeremy Pike, Levi Carson, Dan Peters

Administration: Brian Devlin-Administrative Officer, Vacant- Budget Technician

Dworshak NFH Maintenance:

Terry Weeks, Rick King, Rob Kellar, James Oatman, James Paddelty, Melissa Wright, Kurt McCorkle

Idaho Fish and Wildlife Conservation Office:

Ray Jones, Aaron Garcia, Frank Mullins, Jody Brostrom, Chris Griffith, Mike Murray

Complex Information and Education: Jill Olson

Kooskia NFH: Kenny Simpson, Kayla Warden